

### **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings of claims in the application.

### **LISTING OF CLAIMS:**

1. (Canceled) A method for delivering a substance into skin comprising delivering the substance into an intradermal space within the skin through a small gauge needle inserted into the intradermal space, wherein an outlet of the needle is inserted at a depth within the skin such that leakage of the substance to the surface of the skin is substantially prevented.
2. (Previously Amended) The method of Claim 29, wherein the needle is selected from the group consisting of microneedles, catheter needles, and injection needles.
3. (Previously Amended) The method of Claim 29, wherein a single needle is inserted.
4. (Previously Amended) The method of Claim 29, wherein multiple needles are inserted.
5. (Previously Amended) The method of Claims 29, wherein the substance is a liquid delivered by pressure directly on the liquid.
6. (Previously Amended) The method of Claims 29, wherein a hormone is delivered.
7. (Previously Amended) The method of Claim 6, wherein the hormone is insulin or PTH.
8. (Canceled) The method of Claim 1 wherein the substance is infused.
9. (Canceled) The method of Claim 1 wherein the substance is injected as a bolus.
10. (Previously Amended) The method of Claim 29, wherein the needle is about 300  $\mu\text{m}$  to 2 mm long.
11. (Previously Amended) The method of Claim 29, wherein the needle is about 500  $\mu\text{m}$  to 1 mm long.

12. (Previously Amended) The method of Claim 29, wherein the outlet is at a depth of about 250  $\mu\text{m}$  to 2 mm when the needle is inserted.
13. (Previously Amended) The method of Claim 29, wherein the outlet is at a depth of about 750  $\mu\text{m}$  to 1.5 mm when the needle is inserted.
14. (Previously Amended) The method of Claim 29, wherein the outlet has an exposed height of about 0 to 1 mm.
15. (Previously Amended) The method of Claim 29, wherein the outlet has an exposed height of about 0 to 300  $\mu\text{m}$ .
16. (Previously Amended) The method of Claim 29, wherein the delivery rate or volume is controlled by spacing of multiple needles, needle diameter or number of needles.
17. (Withdrawn) A needle for intradermal delivery of a substance into skin comprising means for limiting penetration of the needle into the skin and an outlet positioned such that when the needle is inserted into the skin to a depth determined by the penetration limiting means, leakage of the substance to the surface of the skin is substantially prevented.
18. (Withdrawn) The needle of Claim 17 wherein the outlet is at a depth of about 500  $\mu\text{m}$  to 2 mm when the needle is inserted into the skin.
19. (Withdrawn) The needle of Claim 18 wherein the outlet is at a depth of about 750  $\mu\text{m}$  to 1.5 mm when the needle is inserted into the skin.
20. (Withdrawn) The needle of Claim 17 which is about 300  $\mu\text{m}$  to 2 mm long.
21. (Withdrawn) The needle of Claim 20 which is about 500  $\mu\text{m}$  to 1 mm long.
22. (Withdrawn) The needle of Claim 17 which is contained in a device comprising a reservoir in fluid communication with the needle.
23. (Withdrawn) The needle of Claim 22 which is contained in a device further comprising pressure-generating means for delivering the substance through the needle.
24. (Withdrawn) The needle of Claim 23 wherein the pressure-generating means provides variable control of substance delivery rate.

25. (Canceled) A method for the administration of a substance to a human subject, comprising delivering the substance into the intradermal compartment of the human subject's skin, so that the substance is distributed systemically.

26. (Canceled) A method for the administration of a substance to a human subject comprising delivering the substance into the intradermal compartment of the human subject's skin in an amount and at a rate sufficient to deliver the substance systemically.

27. (Canceled) A method for the administration of a substance to a human subject, comprising delivering the substance into the intradermal compartment of the human subject's skin, so that a clinically useful amount of the substance is distributed systemically.

28. (Canceled) A method for administration of a substance to a human subject, comprising delivering the substance into an intradermal compartment of the human subject's skin at a controlled volume and rate via a needle having a length sufficient to penetrate the intradermal space and an outlet at a depth within the intradermal space so that the substance is distributed in the plasma.

29. (Previously Amended) A method for administration of a substance to a human subject, comprising delivering the substance through the lumen of a hollow needle into an intradermal compartment of the human subject's skin, which method comprises

(a) inserting the needle into the subject's skin so that the needle penetrates the intradermal compartment, and the needle's outlet depth and exposed height of the outlet are located within the intradermal compartment; and

(b) delivering the substance through the lumen of the needle with the application of pressure in an amount effective to control the rate of delivery of the substance,

so that the substance is delivered through the lumen of the needle into the intradermal compartment and distributed systemically exhibiting a pharmacokinetic profile similar to subcutaneous delivery of the substance, but with a higher maximum plasma concentration and a higher bioavailability.

30. (Canceled) A method for administration of a substance to a human subject, comprising delivering the substance into an intradermal compartment of the human subject's

skin, so that the substance is distributed systemically and has a pharmacokinetic profile similar to subcutaneous delivery of the substance, but with a faster onset of a detectable plasma level.

31. (Canceled) A method for administration of a substance to a human subject, comprising delivering the substance into an intradermal compartment of the human subject's skin, so that the substance is distributed systemically and has a pharmacokinetic profile similar to subcutaneous delivery of the substance, but with a higher bioavailability.